

### REMARKS

In the Office Action, Claim 1 was rejected under 35 USC 103(a) as being unpatentable over Maunula in view of Buchanan.

Claim 1 is directed to a method of producing bulk NO<sub>x</sub> and particulates in the exhaust of a hydrocarbon-burning, internal combustion engine. The invention includes an interdigitated ceramic filter having NO<sub>x</sub> adsorbent material and an NO<sub>x</sub> reduction catalyst disposed on or in the filter

Maunula is directed to a system and method for purifying exhaust gases. As noted by the Examiner, there is no teaching or suggestion in the Maunula reference of using syngas to regenerate the NO<sub>x</sub> adsorbing material.

The Buchanan reference is directed to a process for removing SO<sub>x</sub>, CO and NO<sub>x</sub> from flue gases.

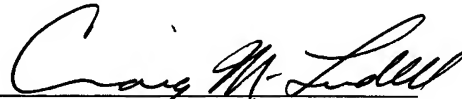
The Examiner argued that it would have obvious to one of ordinary skill in the art at the time the invention was made to use the syngas regeneration of Buchanan in the exhaust purifying method of Maunula. Applicants respectfully disagree. There is no teaching or suggestion in either of the references that the method of Buchanan which treats flue gases from a combustor could be used in treating the exhaust from an internal combustion engine. The Examiner has provided no evidence to indicate how one of skill in the art in trying to remove pollutants in the exhaust from an internal combustion engine would look to the processes utilized in industrial plants for a solution. Neither is there any evidence of how the process used in the Buchanan reference could be adapted for use with an internal combustion engine.

Further, as previously presented, there is no teaching or suggestion in the Maunula reference of how a separate reducing gas could be used in that system to regenerate the NO<sub>x</sub> adsorbent catalyst.

Accordingly, Applicants submit that Claim 1 is clearly patentable over the cited references and reconsideration by the Examiner is requested.

Respectfully submitted,

KE LIU ET AL



Attorney, Craig M. Lundell  
Registration No. 30,284  
(713) 241-2475

P.O. Box 2463  
Houston, Texas 77252-2463